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SEPTA iPhone Application Codename: Wonder Bread

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Codename: Wonder Bread

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Executive Summary

SEPTA (Southeastern Pennsylvania Transportation Authority) is the sixth largest transportation authority in the country. During a normal service day hundreds of thousands of people are transported throughout the city and surrounding counties via SEPTA vehicles. In order to provide great service and offer low fares, SEPTA incorporates many different information systems to provide real time information to the SEPTA control center. This information helps control center managers make informed decisions about the daily operations of all modes of SEPTA transportation. This project will leverage the information provided by these systems in order to provide riders of SEPTA systems with some of the same real time and schedule information that SEPTA employees use and find helpful. The focus of this project will be on the development of a useful mobile application powered by onboard databases and web services.

The final project deliverable will be presented in the form of an iPhone application. The IOS operating system is extremely well developed and has many APIs that can be utilized for the benefit of SEPTA riders. The ability to store databases directly on the phone through SQLite will be useful for quick data retrieval directly on the device. This will allow customers to have access to schedule information when there is no Internet access readily available.

By developing this application for the iPhone, it will not only be able to display schedule information for all the different modes of transportation but also display real time information in a unique way. For example, iPhone app development offers the ability to take advantage of web services for information retrieval. This will allow users to request real time information on the Regional Rail lines as well as the real time locations of a Bus or Trolley. The application will also provide users with the ability to request real time service alerts pushed directly to their mobile device. These services are not currently available on the SEPTA mobile website.

Other features of IOS such as the map and camera kit will also be very instrumental in developing this application. Using the integrated map kit and location services will allow the application access to a user's location. With this information the application can tell how far away you are from a bus or train stop and possibly give the user directions on how to get to their destination.

This project will incorporate all the knowledge gained in both my undergraduate and graduate studies, including the areas of relational databases, project management, data security, and programming logic and design. Mobile application development has become a fast growing phenomenon in the past few years. By developing an application for this technology it will allow SEPTA as an organization to provide better customer service by way of information sharing. It allows the consumption of information anytime, anywhere.

The biggest issue with developing a native mobile application is memory management. Mobile devices only provide a certain amount of memory and processing power to an application. Background processes can sometimes be terminated if other applications in the foreground need more resources to run.

I will be partnering with the SEPTA organization for the development of this application. They have provided apple account credentials. I will however be using my own hardware for development as well as my own development test device. I will be working with other employees in the Information Technology department to expose more data sources during development. The goal of this project is for SEPTA to have a strong presence on the Apple App store by providing reliable and useful applications.

The contents of this project may be viewed at the link below.

http://digitalcommons.lasalle.edu/mathcompcapstones/5/

Project Management Plan

Overview:

The purpose of this project is to create an application that provides utility for customers who ride SEPTA systems, and to gain a presence on the Apple App store.

The scope of this project will focus on porting several key applications that exist on the web platform, but not on mobile.

These applications include:

- Next to Arrive
- TransitView

- TrainView
- Schedules to Go

Additional features such as map views for bus stops, Alerts information, and customer service features will be included to provide improved customer service.

The key project deliverable will be a functional iPhone application that uses real-time and schedule information to provide users with better knowledge to navigate and use SEPTA systems.